

The listing of claims will replace all prior versions, and listings, of claims in this application:

Listing of Claims:

1 (Currently Amended) A Electronic parts mounting method, comprising the

2 steps of:

3 moving a suction section, including a plurality of suction nozzles, to a parts supply
4 section in which a plurality of the electronic parts are stored so that they can be sucked at the
5 same time,

6 sucking the electronic parts stored in the parts supply section onto the plurality of
7 suction nozzles at the same time; and

8 mounting the sucked parts ^{LA M} on a board,

9 wherein the suction nozzles are classified into groups according to ~~their shift amount a~~
10 shift amount of the suction nozzles in each group, a first group including the suction nozzles
11 having a the shift amount of the suction nozzles in each group are within an allowable range
12 for simultaneous suction, and a second group including the suction nozzles each involving
13 having a shift amount outside the allowable range for in which simultaneous suction is
14 possible are set in a different group,

15 and then ^{LA M} the parts are sucked at the same time at each group.

1 2. (Currently Amended) A The parts mounting method according to claim 1:

2 wherein the shift amount is defined between the parts sucked by the suction nozzles
3 and the suction nozzles.

1 3. (Currently Amended) Electronic parts mounting method, comprising the steps
2 of:

3 moving a suction section, including a plurality of suction nozzles, to a parts supply
4 section in which a plurality of the electronic parts are stored so that they can be sucked at the
5 same time,

6 sucking the electronic parts stored in the parts supply section onto the plurality of
7 suction nozzles at the same time;

8 mounting the sucked parts on a board,

9 wherein the suction nozzles are classified into groups according to a shift amount of
10 the suction nozzles in each group, a first group including the suction nozzles having a shift
11 amount within an allowable range for simultaneous suction, and a second group including the
12 suction nozzles having a shift amount outside the allowable range for simultaneous suction,

13 and then the parts are sucked at the same time at each group;

14 wherein the shift amount is defined between the parts sucked by the suction nozzles
15 and the suction nozzles; and

16 ~~The parts mounting method according to claim 2 further comprising;~~

17 ~~a step of~~ calculating a position correction value of each suction section according to
18 the shift amount at each group classified,

19 wherein the parts are sucked at the same time at each group after correcting a position
20 of each suction section by using the position correction value.

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1 4. (Original) The parts mounting method according to claim 3,
2 wherein the position correction value of the suction section is an average of the
3 maximum and the minimum of the shift amount,
4 wherein the shift amount is defined between the center of each suction nozzle and the
5 center position of a part at a parts suction position.

1 5. (Currently Amended) Electronic parts mounting method, comprising the steps
2 of:

3 moving a suction section, including a plurality of suction nozzles, to a parts supply
4 section in which a plurality of the electronic parts are stored so that they can be sucked at the
5 same time,

6 sucking the electronic parts stored in the parts supply section onto the plurality of
7 suction nozzles at the same time;

8 mounting the sucked parts on a board,

9 wherein the suction nozzles are classified into groups according to a shift amount of
10 the suction nozzles in each group, a first group including the suction nozzles having a shift
11 amount within an allowable range for simultaneous suction, and a second group including the
12 suction nozzles having a shift amount outside the allowable range for simultaneous suction,

13 and then the parts are sucked at the same time at each group;

14 wherein the shift amount is defined between the parts sucked by the suction nozzles
15 and the suction nozzles;

16 ~~The parts mounting method according to claim 2 further comprising~~

17 ~~the steps of:~~

18 detecting each position of a plurality of the suction nozzles; and
19 calculating a shift amount according to the each position detected,
20 wherein the shift amount is defined between a center position of the suction nozzle
21 and a center position of the parts at the point where the parts are sucked.

1 6. (Original) The parts mounting method according to claim 5,
2 wherein the center position of the suction nozzle is detected after recognizing a tip
3 face of each suction nozzle.

4 7. (Original) The parts mounting method according to claim 6,
5 wherein the center position of the suction nozzle is detected after placing an
6 inspection jig on each suction nozzle.

7 8. (Original) The parts mounting method according to claim 3,
8 wherein the shift amount is between the center of each suction nozzle and the center
9 of a part,
10 the shift amount is found by a parts recognition unit for recognizing the suction state
11 of the part onto the suction nozzle, and
12 the groups of the suction nozzles and the position correction value of the suction
13 section at each group are changed according to the shift amount,
14 wherein the parts are suck simultaneously at each of the groups.

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1 9. (Currently Amended) The parts mounting method according to claim 1,
2 wherein the plurality of suction nozzles are classified into ~~a specific group~~ one of the
3 first group and the second group in order to suck the parts,
4 wherein, at ~~the suction nozzles~~ said each group classified, errors for suction have
5 occurred exceeding ~~an allowable~~ a predetermined number of times or the parts suction ratio
6 is less than ~~an allowable~~ a predetermined value.

1 10. (Currently Amended) The parts mounting method according to claim 1 further
comprising:

2 selecting a feature to select a mode of allowable range for simultaneous suction from
3 several modes; and

4 setting a feature to set the selected mode in order to classify the suction nozzles into
5 several groups according to the modes,

6 wherein the modes are divided into several ranks between a mode for giving high
7 priority to productivity and a mode for giving high priority to parts suction ratio.

1 11. (Original) The parts mounting method according to claim 2,
2 wherein the shift amount between the center of a part at a parts suction position and
3 the center of each suction nozzle,
4 and the shift amount is corrected by changing a feed amount of the parts from the
5 parts supply section.

12-16. (Withdrawn)